

## REMARKS/ARGUMENTS

Claims 1-4, 6-13, 15, 16, 18, 20-23, 26-30, 41-45 and 48-52 remain pending in the instant application. Claims 1 and 48 have presently been amended. Support for the amendments to claims 1 and 48 may be found throughout the specification as originally filed, including, *e.g.*, Figures 23-25 and pages 23-26. Claims 3, 11-13, 16, 22, 23, 27-30 and 41-45 have previously been withdrawn. Claims 5, 14, 17, 19, 24, 31-40, 46 and 47 have previously been canceled.

### 1. Rejection of Claims 1, 2, 4, 6-10, 15, 18, 20 and 48-50 Under 35 U.S.C. 102(e)

Claims 1, 2, 4, 6-10, 15, 18, 20 and 50-52 stand rejected under 35 U.S.C. 103 as being unpatentable over Michelson et al. (U.S. Pat. No. 6,890,355) in view of Brantigan (U.S. Patent No. 5,192,327) and Viart (U.S. Patent No. 6,682,562).

On page 7 of the Office Action, the Examiner indicates that to further prosecution the applicant is advised to amend the claims to better define the roundness of the entire device and the width of the grooves between the serrations. Applicant has now amended claim 1 and invites the Examiner to telephone the below signed attorney regarding these amendments. Claim 1 has now been amended to call for a vertebral body replacement in which (1) the body is asymmetric when viewed from the top and wherein one of the growth hole faces is a planar face and the other growth hole face is arcuate, extending outwardly, between the anterior face and the posterior face when viewed from the top and (2) the top includes a plurality of serrations and at least one elongated groove that extends generally through at least two of the plurality of serrations, along the top, through the posterior face, and parallel to the planar face, the at least one elongated groove having a width to receive a channel insertion tool, and teeth forming the serrations providing openings generally orthogonal to the at least one elongated groove, and bottom includes at least one groove that extends generally parallel to the planar face and has a width to receive a channel insertion tool.

With respect to claim 1, the Examiner indicates that Michelson teaches a metal vertebral body replacement comprising a body 300, nonparallel top and bottom surfaces having a plurality of through holes and continuous grooves 314 and protrusions, a planar growth hole face 310 and a curved growth hole face 312 having four through holes 319 and a curved anterior face 304. The Examiner states that Michelson fails to disclose a groove on the top surface that extends through the anterior and posterior faces. The Examiner indicates that Brantigan teaches a spinal implant comprising a body having a top surface with projections and grooves that extend generally along the top though the anterior and poster faces in the same field of endeavor for the purpose of securing the implant to the implant site. The Examiner also indicates that Viart teaches a spinal implant with a body having a top surface with varying projection and grooves including teeth aligned with an edge orthogonal to the grooves formed between them in the same field of endeavor for the purpose of providing more surface area engaging the surrounding bodies.

Applicant respectfully submits that Michelson, Brantigan, and Viart, either alone or in combination with one another, fail to teach or suggest every feature of amended claim 1. Specifically, Michelson, Brantigan, and Viart fail to teach or suggest both serrations and at least one elongated groove in the top of the body that extends through the anterior face and the posterior face of the body in which teeth forming the serrations providing openings generally orthogonal to the at least one elongated groove. In other words, the teeth form openings which extend across the implant and there is at least one groove generally orthogonal to the openings of the teeth. (Neither Michelson, Brantigan, nor Viart provide one or more grooves of this type.) As clearly shown in, *e.g.*, Figures 23-25 of the instant application, groove 160 in the top 116 of the body 112 extends all the way through both the anterior face 113 and the posterior face 114 as well as the serrations 134.

Michelson, Brantigan, and Viart fail to teach or suggest an asymmetric body when viewed from the top and wherein one of the growth hole faces is a planar face and the other growth hole face is arcuate, extending outwardly, between the anterior face and the posterior face when viewed from the top. Michelson, Brantigan, and Viart fail to teach or suggest a top that includes a plurality of serrations and at least

one elongated groove that extends generally through at least two of the plurality of serrations, along the top, through the posterior face, and parallel to the planar face, the at least one elongated groove having a width to receive a channel insertion tool, and teeth forming the serrations providing openings generally orthogonal to the at least one elongated groove; and wherein the bottom includes at least one groove that extends generally parallel to the planar face and has a width to receive a channel insertion tool. Applicant believes claim 1 is allowable, at least, for these reasons.

Applicant believes claims 2, 4, 6-10, 15, 18, 20 and 50-52 are allowable, at least, because they depend from claim 1.

## 2. Rejection of Claim 21 under 35 U.S.C. 103(a)

Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Michelson in view of Brantigan and Viart as applied in Section 1 above and further in view of Paul et al. (U.S. Pat. No. 6,143,033).

Applicant believes claim 21 is allowable, at least, because it depends from claim 1 and because Paul fails to disclose that which is missing from Michelson, Brantigan, and Viart as discussed in Section 1 above.

## 3. Rejection of Claim 26 under 35 U.S.C. 103(a)

Claim 26 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Michelson in view of Brantigan and Viart as applied in Section 1 above and further in view of Wagner et al. (U.S. Pat. No. 5,306,309).

Applicant believes claim 26 is allowable, at least, because it depends from claim 1 and because Wagner fails to disclose that which is missing from Michelson, Brantigan, and Viart as discussed in Section 1 above.

#### 4. Rejection of Claims 48 and 49 under 35 U.S.C. 103(a)

Claims 48 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Michelson in view of Brantigan.

On page 7 of the Office Action, the Examiner indicates that to further prosecution the applicant is advised to amend the claims to better define the roundness of the entire device and the width of the grooves between the serrations. Applicant has now amended claim 1 and invites the Examiner to telephone the below signed attorney regarding these amendments. Claim 48 has now been amended to call for a vertebral body replacement in which (1) the body is asymmetric when viewed from the top and wherein one of the growth hole faces is a planar face and the other growth hole face is arcuate, extending outwardly, between the anterior face and the posterior face when viewed from the top and (2) the top includes the top includes at least one elongated groove that extends generally along the top, through the anterior face and the posterior face, and parallel to the planar face and the at least one elongated groove having a width to receive a channel insertion tool, and the bottom includes at least one groove that extends generally parallel to the planar face and has a width to receive a channel insertion tool.

Applicant respectfully submits that Michelson and Brantigan, either alone or in combination with one another, fail to teach or suggest every feature of amended claim 48. Specifically, Michelson and Brantigan fail to teach or suggest both serrations and at least one elongated groove in the top of the body that extends through the anterior face and the posterior face of the body in which teeth forming the serrations providing openings generally orthogonal to the at least one elongated groove. In other words, the teeth form openings which extend across the implant and there is at least one groove generally orthogonal to the openings of the teeth. (Neither Michelson nor Brantigan provide one or more grooves of this type.) As clearly shown in, e.g., Figures 23-25 of the instant application, groove 160 in the top 116 of the body 112 extends all the way through both the anterior face 113 and the posterior face 114 as well as the serrations 134.

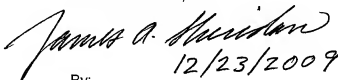
Michelson and Brantigan fail to teach or suggest an asymmetric body when viewed from the top and wherein one of the growth hole faces is a planar face and the other growth hole face is arcuate, extending outwardly, between the anterior face and the posterior face when viewed from the top. Michelson and Brantigan fail to teach or suggest a top that includes at least one elongated groove that extends generally along the top, through the anterior face and the posterior face, and parallel to the planar face and the at least one elongated groove having a width to receive a channel insertion tool, and the bottom that includes at least one groove that extends generally parallel to the planar face and has a width to receive a channel insertion tool. Applicant believes claim 48 is allowable, at least, for these reasons.

Applicant believes claim 49 is allowable, at least, because it depends from claim 48.

#### 5. Conclusion

In light of the amendments and remarks provided herein, applicants respectfully request the issuance of a Notice of Allowance.

Respectfully submitted,  
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By: \_\_\_\_\_

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